EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL OF ECONOMIC ADVISERS
WASHINGTON, D.C. 20500

May 15, 1987

MEMORANDUM FOR RALPH BLEDSOE

FROM: THOMAS G. MOORE

SUBJECT: OZONE BACKGROUND PAPER

CEA strongly believes that a paragraph discussing the economic benefits and costs of the CFC control options currently under discussion should be included in the background paper. Our suggested draft of such a paragraph is as follows:

"Given the current model projections of ozone depletion and estimates of the health consequences of increased ultraviolet radiation, assuming no behavioral changes, it is possible to calculate a lower bound on the economic benefits of the CFC control protocol presently under discussion. EPA's risk assessment indicates that the freeze + 20% cutback will avoid approximately 992,900 deaths in the U.S. from skin cancer among people alive today and those born through 2075. An additional 30% cutback will save an additional 78,700 lives. The economic benefit of saving these lives, under standard assumptions for valuation of statistical lives saved and discounting of future values, is very large.

Action	Economic benefit (1987 dollars)
Freeze + automatic 20% reduction	$1328 billion
Additional 30% reduction	$106 billion

These benefits, which do not include non-health benefits or benefits from avoidance of non-fatal skin cancers and cataracts, are much larger than the costs of control estimated by industry or EPA. Industry has estimated that the cost of a freeze to the U.S. would be about $1 billion cumulatively between now and the year 2000. EPA has estimated that the cost of a 30% reduction in the controlled substances would be about $3-$4 billion cumulatively between now and the year 2000. Taking the higher of the EPA estimates, the total discounted cost of a freeze plus 20% reduction would not be higher than $13 billion, and could be much less if substitutes for CFCs are cheaper than presently anticipated. Thus the benefit-cost ratio of the freeze + automatic 20% reduction is approximately 100 to 1. An additional 30% reduction in CFCs also appears to be economically justified on the basis of current knowledge, although the benefit-cost ratio is much smaller. However, estimates of the cost of substitutes will be much better after more experience has been gained, and the additional 30% reduction step will not be taken until after further scientific, technical, and economic review."